Injury Extra (2004) **35**, 76–77

www.elsevier.com/locate/inext

CASE REPORT

An unusual cause of hip pain in a child 'a pencil case'

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Accepted 29 April 2004

Introduction

An obese 12-year-old boy was preparing to leave home for school when he slipped on his pencil case and fell down stairs. He was able to get up immediately but stayed home from school as he developed pain in his right thigh. Due to an increase in the severity of the pain and a progressive unwillingness to bear weight on the affected side, he presented to the Accident and Emergency department with his mother. The pain radiated from his groin to the knee and was associated with intermittent paraesthesia in the same distribution.

Examination revealed a 0.8 cm puncture wound in the flexor crease of the right groin, which was exquisitely tender on palpation. All hip movements were painful and restricted, both actively and passively. Neurovascular examination of the limb was normal.

Plain radiographs (Fig. 1) excluded a bony injury but did reveal the impression of a foreign body in the region of the femoral triangle.

Exploration of the wound under general anaesthesia revealed a bright pink, 10 cm long, colouring pencil (Fig. 2), lying 2.5 cm beneath the skin surface in a sagittal direction. It was embedded between the femoral artery and femoral nerve. The pencil was removed without injury to these structures and the wound was thoroughly irrigated. The patient was discharged the following day on a 5-day course of oral antibiotics.

Discussion

Hip pain and limp in a child is a commonly encountered problem. In broad terms, causes of a limping child may be congenital or acquired. The pathology may be local, either within the hip joint or from surrounding structures. Referred pain from the spine or abdomen must also be considered. There are many causes of limp in a child in non-traumatic cases, yet certain causes may be supported or discounted on the grounds of age.[5] Other unusual

Figure 1 Plain radiograph showing the foreign body in the region of the right hip.

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1572-3461
doi:10.1016/j.injury.2004.04.014

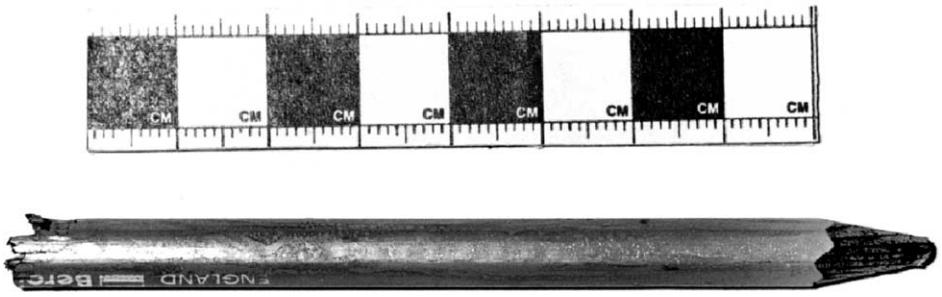

Figure 2 The removed pencil.

causes of hip pain to have been reported include muscle abscess, developmental coxa vara and myositis ossificans.[3,4,7] In this particular case, in a child of twelve years, the differential diagnoses included fracture, soft tissue injury, slipped upper femoral epiphysis, infection and foreign body. The history must detail events surrounding the onset of the pain, its nature and site of pain and any associated radiation. Systemic signs, including pyrexia, are also important to note.

Full exposure and comparison of shape with the contralateral limb may also reveal swelling, wasting or a lump. Careful inspection may reveal scars, a change in colour, asymmetrical creases or a barely noticeable wound as in this case. Palpation will give information concerning abnormalities of the skin, soft tissues, bones and joints. Active and passive movement of the hip must also be assessed prior to assessing gait. Adjacent structures to the hip must also be examined including the abdomen, inguinal region, the back and the knee. Asking the child to point to the site of maximal pain at the time of attempted weight bearing can also be very useful.[5]

Plain radiographs often provide adequate imaging in trauma although ultrasound, magnetic resonance imaging and computerised tomography may also be useful in non-traumatic cases.[6,11] Inadequate imaging of suspected retained foreign bodies has resulted in a significant number of unsuccessful litigation defence claims. Plain films and other imaging studies should be used more frequently in order to avoid missing the diagnosis of a foreign body especially glass.[6]

The suspicion of a foreign body from the plain hip radiograph, along with a suggestive history and examination prompted wound exploration under general anaesthesia. All wounds should be considered to be at risk for foreign body entry and once discovered the clinician must weigh the potential harm of the foreign body in its current location against the risks of its attempted removal. Failure to localise and removal a foreign body can lead to significant morbidity.[2,9]

Few cases have been reported detailing an occult foreign body as the cause of pain in the region of the hip joint following trauma.[1,10] This case represents an unusual cause for a limp in a child. It is important in that it highlights the importance of a detailed history, thorough examination relevant imaging and exploration in order to exclude the majority of foreign bodies.[2,8] The possibility of a foreign body should be considered in such cases. Beware the pencil case!

References

1. Bhosale PB, Dhir RS, Tejwani NC. An unusual case of hip disability. J Postgrad Med 1989;35(4):232—4.
2. Brown CK, Wooten SL, Fair LK. Retained foreign body: a fingernail fragment? J Emerg Med 1993;11(3):259—64.
3. Howell M, Guly H. A case of muscle abscess presenting to an accident and emergency department. J Acc Emerg Med 1997;14:180—2.
4. Hynes M, Lam F. An unusual cause of hip pain in a child. Emerg Med J 2001;39(3):175—82.
5. Hunt D. The limping child. Postgraduate textbook of clinical orthopaedics. 2nd ed. Blackwell Science; 1995. p. 133—56.
6. Kaiser CW, Slowick T, Spurling KP, Friedman S. Retained foreign bodies. J Trauma Inj Infect Crit Care 1997; 43(1):107—11.
7. Lam F, Hussain S, Sinha J. An unusual cause of a limp in a child: developmental coxa vara. Emerg Med J 2001; 18(4):314.
8. Lammers RL, Magil T. Detection and management of foreign bodies in soft tissue. Emerg Med Clin North Am 1992; 10(4):767—81.
9. McCallum WG, Fromm Jr RE. Fish scale: an unusual foreign body. Am J Emerg Med 1995;13(4):419—20.
10. Nassif JM, Gorcyza JT, Vanarthos WJ. Unrecognised foreign body in the hip joint. J Orthop Trauma 1996;10(3):216—9.
11. White PM, Boyd J, Beattie TF, et al. Magnetic resonance imaging as the primary imaging modality in children presenting with acute non-traumatic hip pain. Emerg Med J 2001;18:25—9.